

NOVEMBER 2019



**WIM #38  
I-535, MP 1.1  
DULUTH, MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #38 is located on I-535 near Duluth in St Louis county.

## System Operation

WIM #38 was operational for the entire month of November 2019. Volume was computed using all monthly data.

## System Calibration

WIM #38 was most recently calibrated on 2015-08-10. Table 1 summarizes the front axle weights of class 9s by lane <sup>1</sup>. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation <sup>2</sup>. Figure 2 depicts the average front axle weight as a percent difference from the first full month following calibration.

## Summary of Volume Statistics

Total Monthly Volume: 917714 | Passenger Vehicles: 869157 | Heavy Commercial Vehicles: 48557

Monthly Average Daily Traffic (MADT): 30891 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1619

See Table 2 for vehicle class breakdown

## Passenger Vehicles (PVs) and Heavy Commercial Vehicles (HCVs)

**Volume trends.** NB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays. SB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays (see Figure 3 and 4).

### Passenger Vehicles (PVs)

**Volume trends.** On an average 24-hour day (see Figure 5), NB PVs generally reached peak volume levels between 07 AM and 04 PM. Similarly, SB PVs peaked in volume between 03 PM and 05 PM

### Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling NB typically reached peak volume levels between 07 AM and 04 PM, while volume going SB peaked between 03 PM and 05 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

### Overweight HCVs

**Volume trends.** Of a total of 48557 HCVs, 2788 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 0.3% of total monthly volume, and 6% of total monthly

HCV volume. NB overweight vehicles typically reached highest numbers on Tuesdays, with lowest volumes reported on Sundays. SB overweight vehicles tended to reach highest volumes on Tuesdays, with lowest volumes reported on Sundays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 6 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 60.9% of all overweight vehicles traveling NB this month (see Figure 7 & 8). Figure 9 shows the number of vehicles exceeding 88,000 pounds that crossed the WIM over the last 12 months. The highest number of 88,000+ vehicles within the last 12 months occurred in July.

WIMs are currently used as a screening tool for weight enforcement, and it is estimated that the WIM scales can measure gross vehicle weights (GVW) within 90-95% of static weight scale measurements. Due to the possibility of measurement error, vehicles exceeding 10% of their legal weight limits (or 1.1 times their legal weight limits) are considered overweight in this report <sup>4</sup>.

Using normal load limits ,37 NB vehicles exceeded 88,000 pounds (13 vehicles were Class 10's; 11 vehicles were Class 13's). Of vehicles traveling SB,

74 NB vehicles exceeded 88,000 pounds (39 vehicles were Class 13's; 26 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from November 2019.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in November 2019. Data suggests that there were greater numbers of fully\_loaded Class 9's than empty Class 9's traveling NB, while there were more fully\_loaded Class 9's than empty traveling SB. Data also suggests that there were more fully\_loaded Class 10's than empty traveling in the NB direction. In the SB direction, there were more fully\_loaded class 10 vehicles.

**Freight Totals.** A total of 342941 tons of freight was recorded to have crossed the WIM. More freight was shipped SB (51.6%) than NB (48.4%). See Table 4 and Figure 11 for more freight information.

**####Infrastructure Considerations Bridge.** Bridge No. 9030 (Blatnik Bridge) is approximately 1.1 miles south of WIM #38, and Bridge No. 69808 is 0.45 miles south of WIM #38. A pair of bridges also exists 0.4 miles north of WIM #38 (Bridge No. 69801C on the NB side and Bridge No. 69801N on the SB side). WIM #38 recorded a total of 917714 vehicles with a combined GVW of 5558320 kips (1 kip = 1,000 pounds = 0.5 tons) in November 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 37126 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 59% of all ESALs were recorded NB while 41% was observed SB. In particular, 51% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 19% of total GVW observed this month). See Table 6 and Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

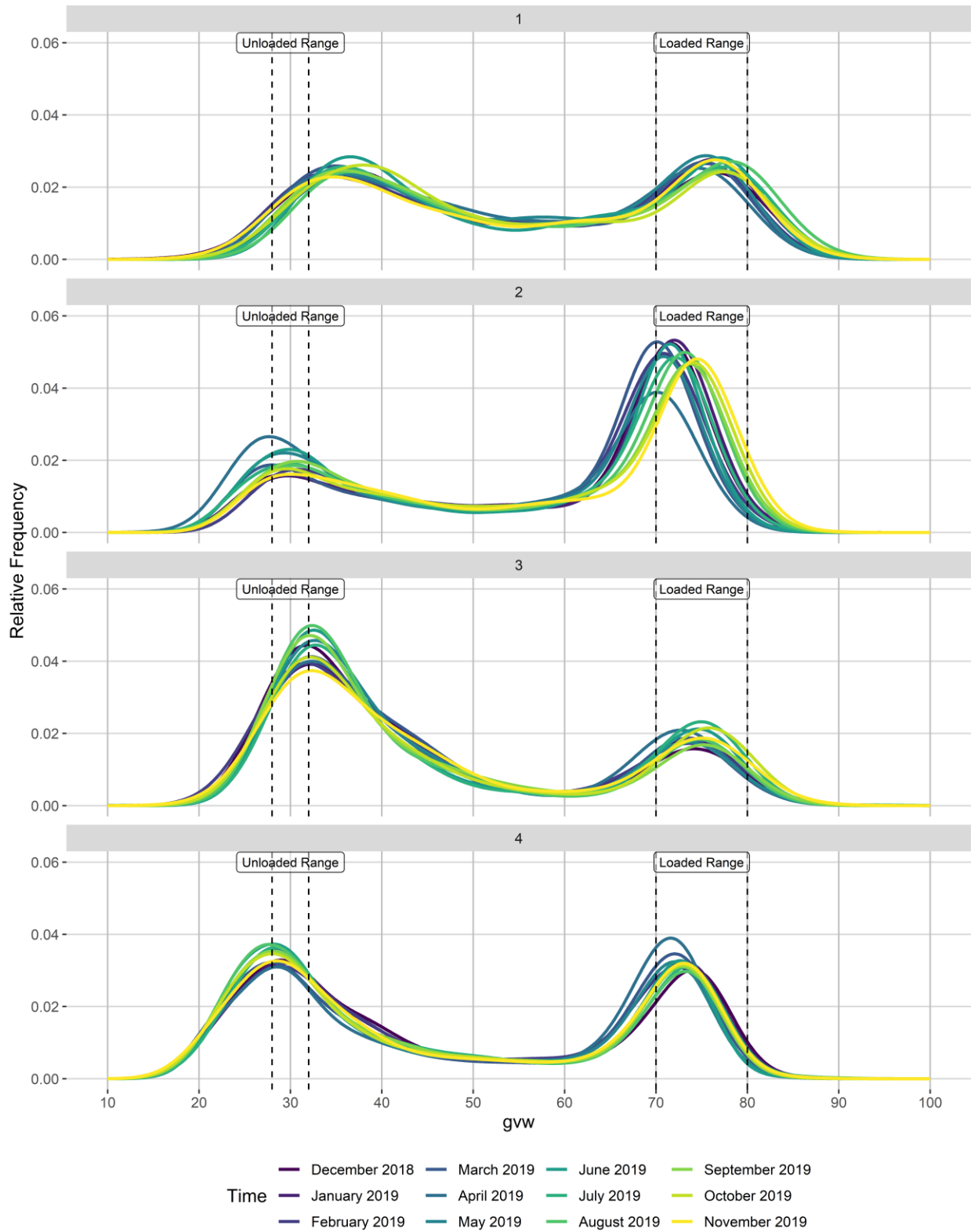
#####WIM monthly reports can be found at:

<http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html> MnDOT's vehicle classification scheme and vehicle class groupings for traffic forecasting can be found at:  
<http://www.dot.state.mn.us/traffic/data/data-products.html#weight>

- <sup>1</sup> Front axle weights of Class 9s are monitored on a monthly basis to assure performance between calibrations. The current goal of the WIM scale calibration is to have each individual axle weight stay within a range of ±9% of baseline calibration values
- <sup>2</sup> Previous WIM research indicates that unloaded Class 9s typically weigh 28-32 kips, while loaded Class 9s generally fall in the 70-80 kip range. More recent data from several WIM sites suggests that the unloaded Class 9 range may have moved a little higher over time (due to increased presence of sleeper cabs, etc.), although these ranges are also thought to be site-specific.
- <sup>3</sup> An HCV is considered overweight during normal load limits in this report if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 80,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 20,000 pounds; tandem axles spaced 8' or less = 34,000 pounds; tridem axles spaced 9' or less = 43,000 pounds; quad axles spaced 13' or less = 51,000 pounds). Monthly reports use this standard regardless of the time of year however, the Winter Load Increase (WLI) allows a 10% across the board increase in axle and gross vehicle weights without a permit on US, state routes, and county roads. An HCV is considered overweight during Winter Load Increase(WLI) if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 88,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 22,000 pounds; tandem axles spaced 8' or less = 37,400 pounds; tridem axles spaced 9' or less = 47,300 pounds; quad axles spaced 13' or less = 56,100 pounds). An overweight HCV is only included once in the overweight volume calculations regardless of how many of the aforementioned conditions are violated. For information on MN weight limit dates and statutes:  
[http://www.mrr.dot.state.mn.us/research/seasonal\\_load\\_limits/sllindex.asp](http://www.mrr.dot.state.mn.us/research/seasonal_load_limits/sllindex.asp)
- <sup>4</sup> For example, Class 9s and 10s can legally have gross vehicle weights up to 80,000 lbs (with the exception of permitted loads) during normal load limits. To account for measurement error on the WIM scales, those exceeding 10% of the legal GVW maximum (or 1.1 times the legal GVW) should be screened (e.g., 80,000 lbs + 8,000 lbs = 88,000 lbs). Similarly during WLI vehicles weighing 96,800 lbs should be screened.

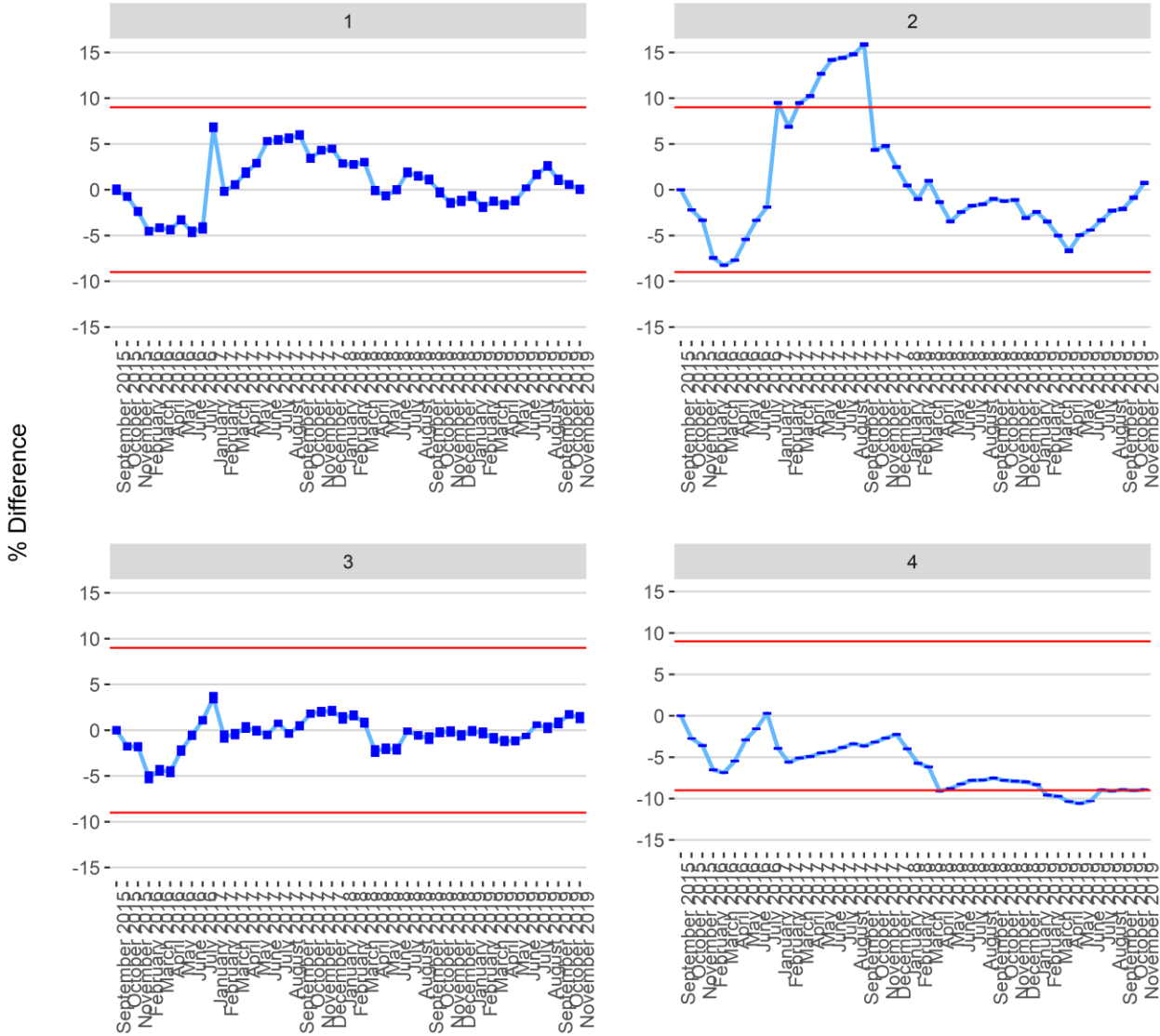
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Figure 1 - Monthly Class 9 GVW Histogram



Months that have not passed QC parameters are not displayed

Figure 2 - Percent Difference of Front Axle Weight from  
Last Calibration (+/- 95% CI)



Months that have not passed QC parameters are not displayed

Figure 2 - Average Vehicle Volume  
vs. Day of the Week

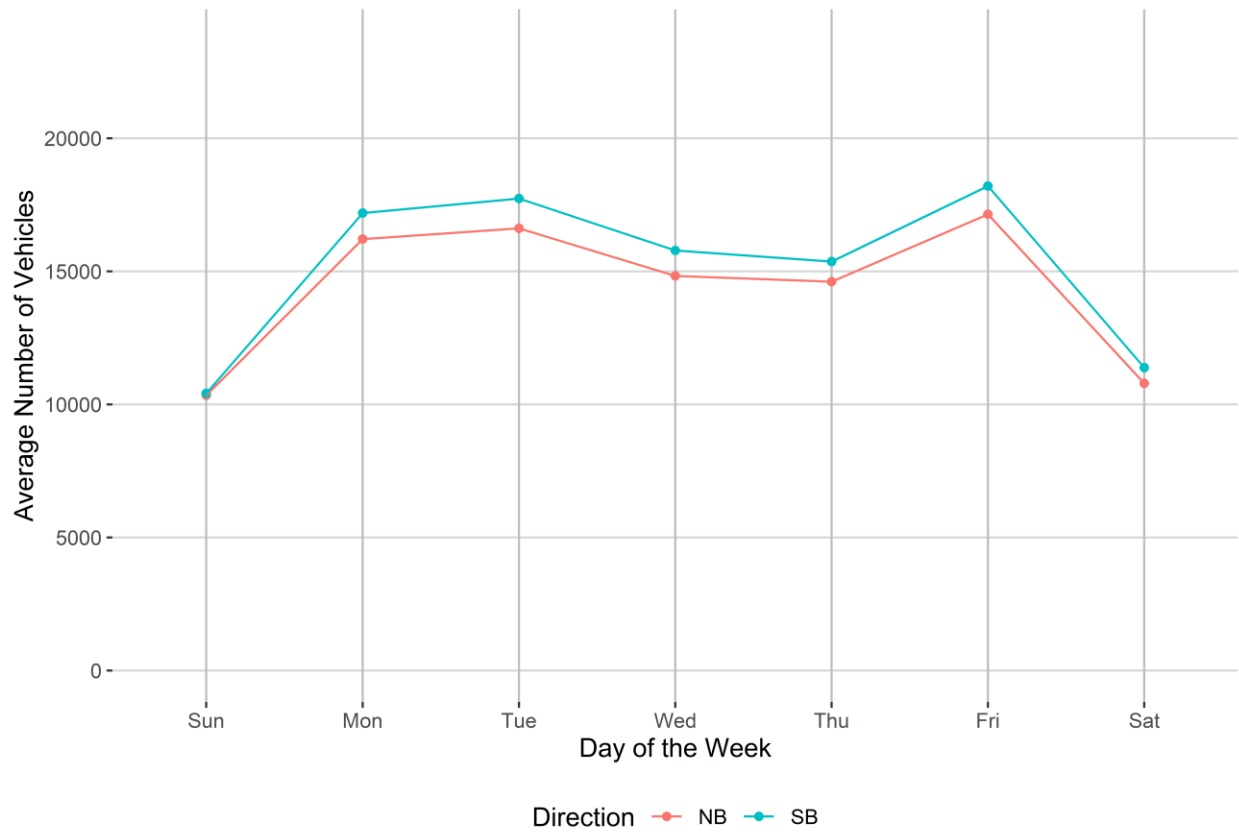


Figure 3 - Average Overweight Vehicle Volume  
vs. Day of the Week

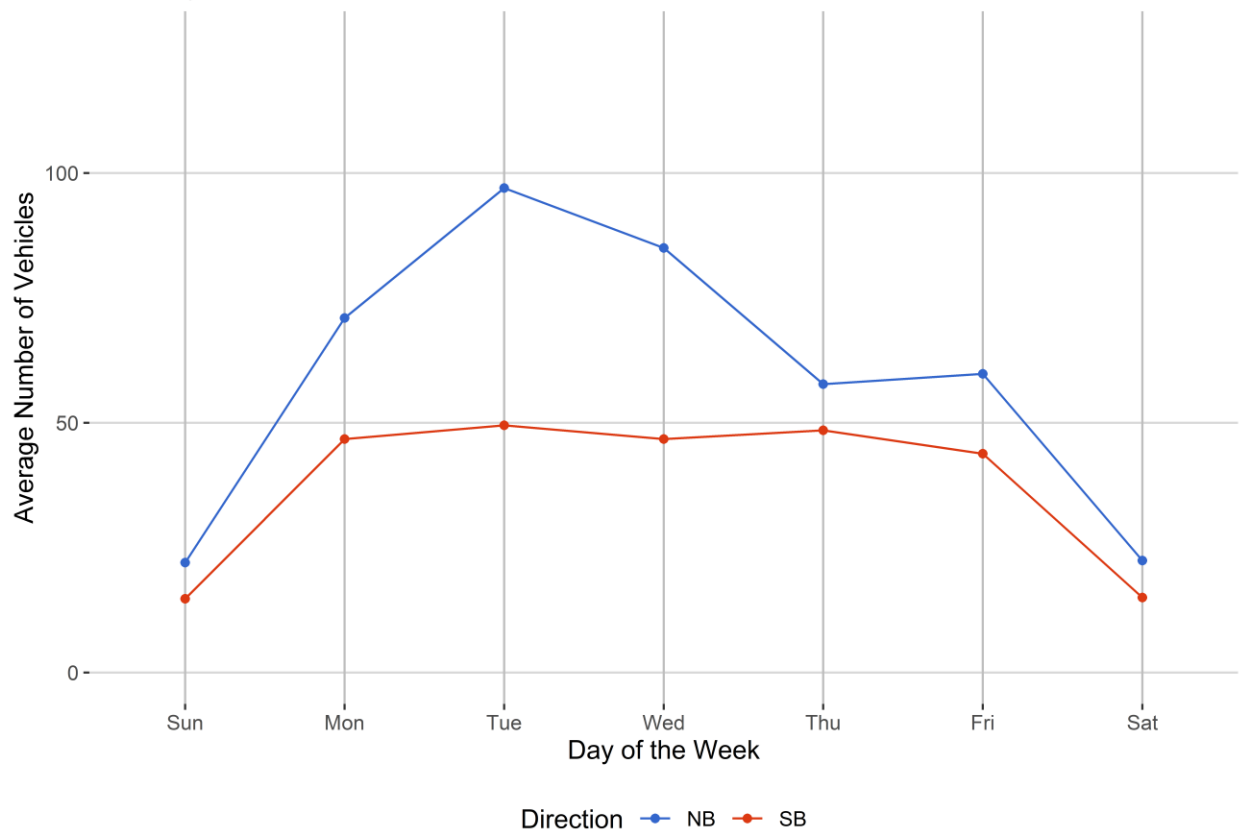


Figure 4 - Passenger Vehicles  
vs. Hour of the Day

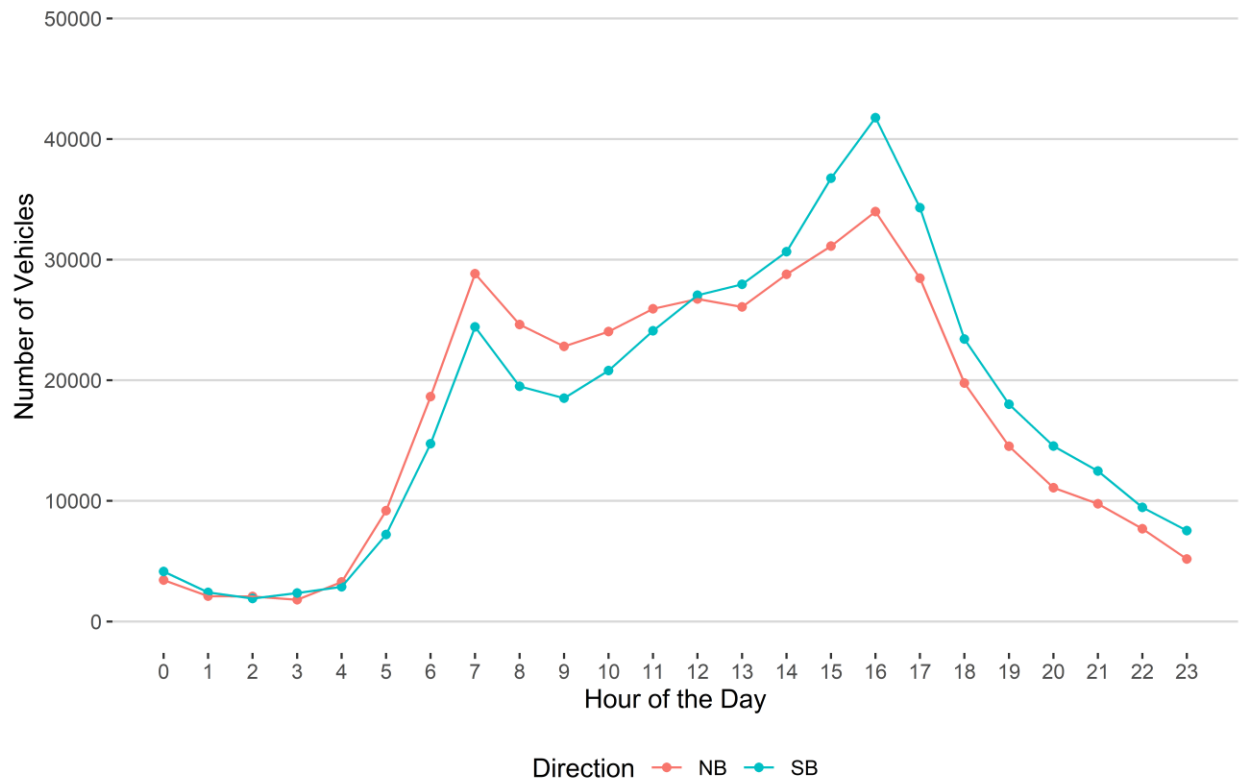


Figure 5 - Heavy Commercial Vehicles  
vs. Hour of the Day

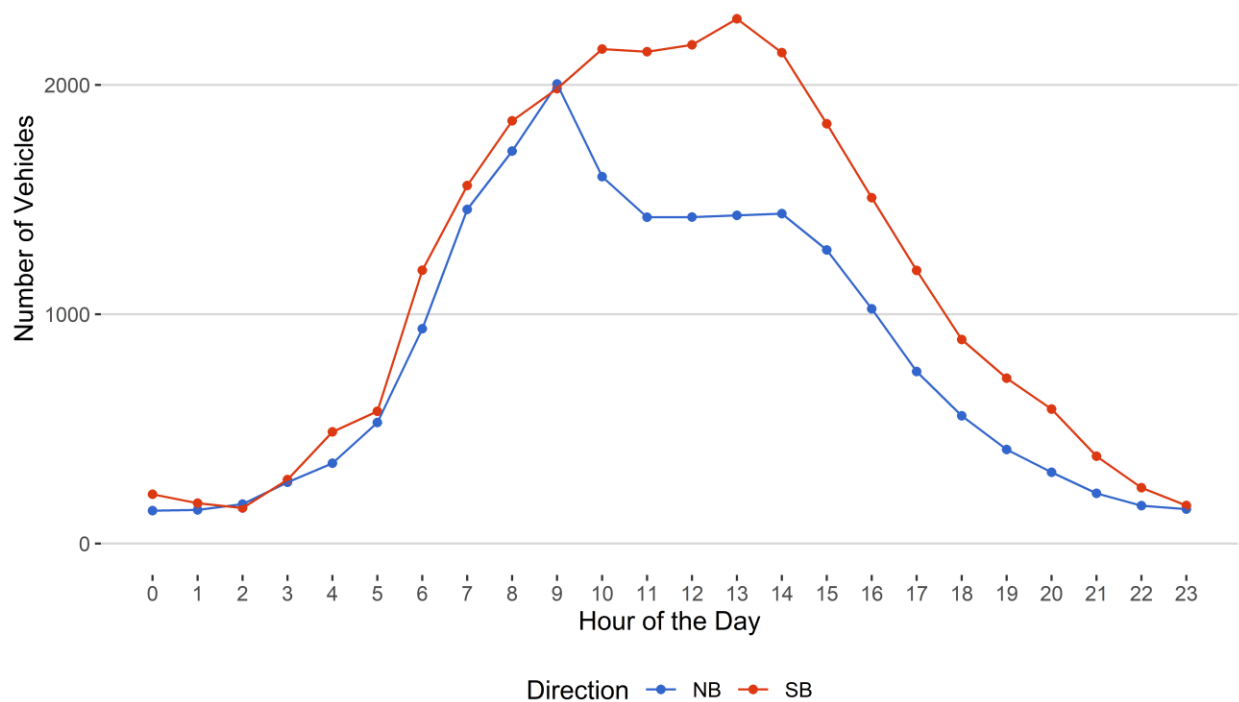


Figure 6 - Overweight Vehicles by Class  
vs. Hour of the Day

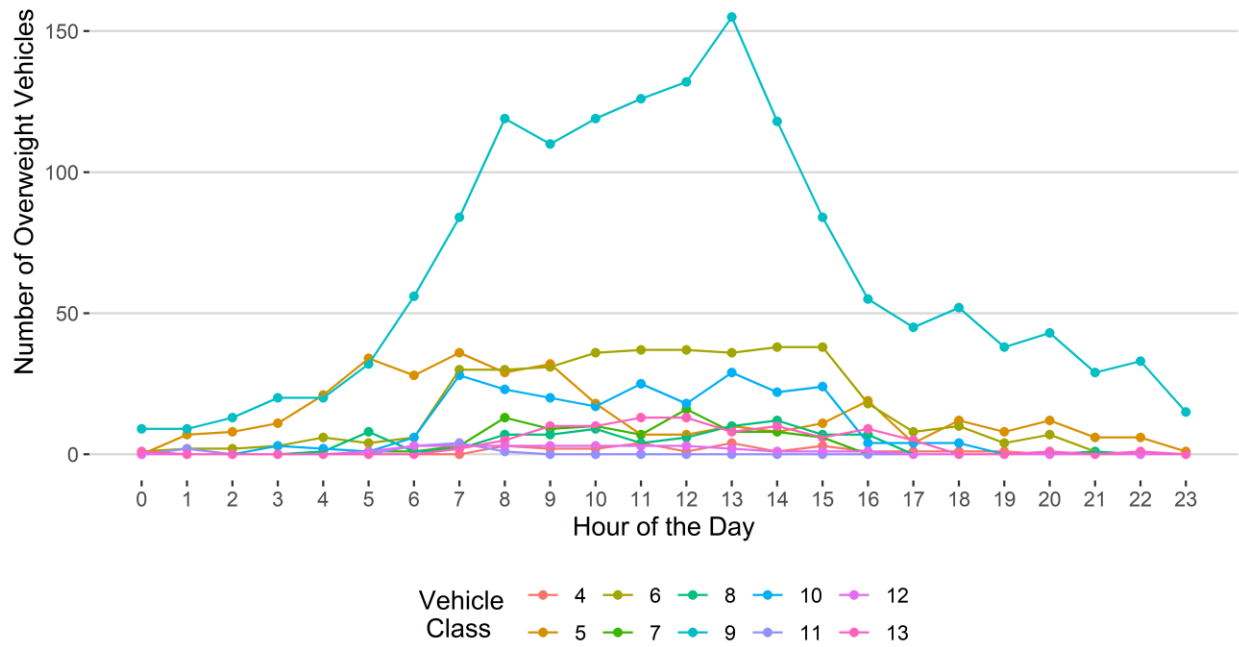


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

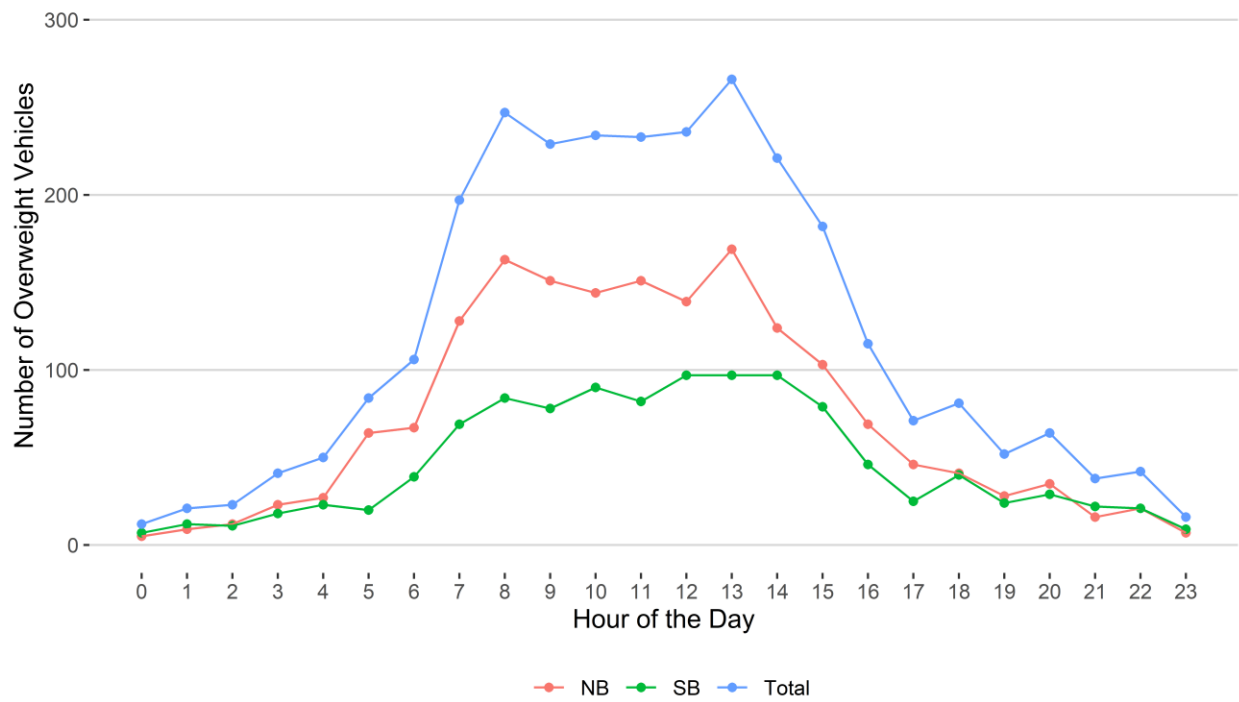
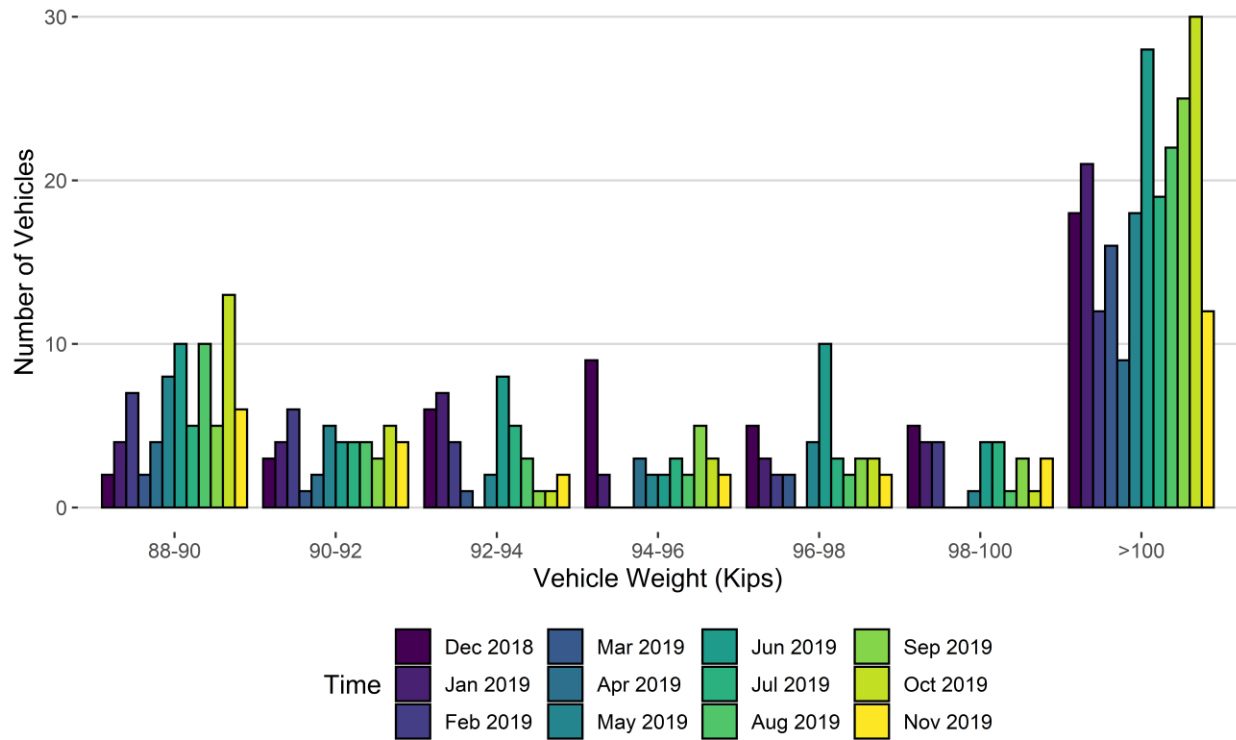
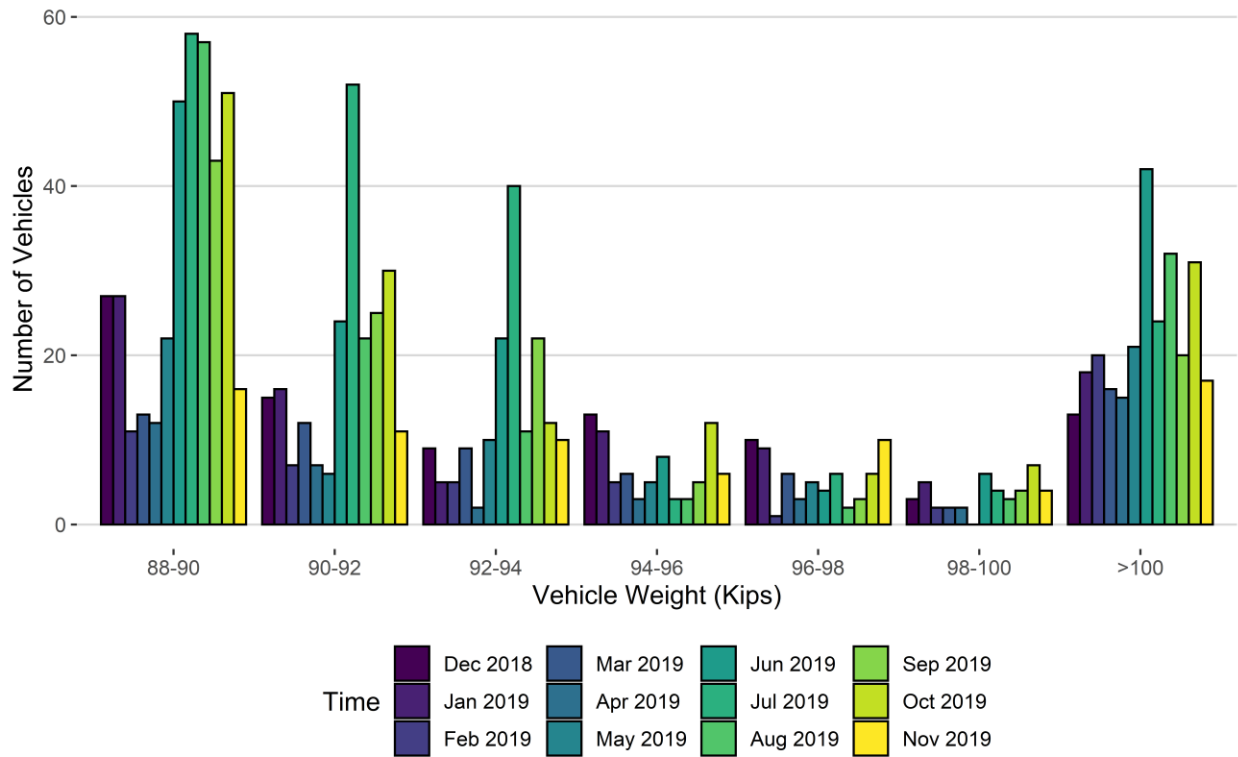


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019
88-90	2	4	7	2	4	8	10	5	10	5	13	6
90-92	3	4	6	1	2	5	4	4	4	3	5	4
92-94	6	7	4	1	0	2	8	5	3	1	1	2
94-96	9	2	0	0	3	2	2	3	2	5	3	2
96-98	5	3	2	2	0	4	10	3	2	3	3	2
98-100	5	4	4	0	0	1	4	4	1	3	1	3
>100	18	21	12	16	9	18	28	19	22	25	30	12
Total	48	45	35	22	18	40	66	43	44	45	56	31

Figure 8 - Histogram of SB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019
88-90	27	27	11	13	12	22	50	58	57	43	51	16
90-92	15	16	7	12	7	6	24	52	22	25	30	11
92-94	9	5	5	9	2	10	22	40	11	22	12	10
94-96	13	11	5	6	3	5	8	3	3	5	12	6
96-98	10	9	1	6	3	5	4	6	2	3	6	10
98-100	3	5	2	2	2	0	6	4	3	4	7	4
>100	13	18	20	16	15	21	42	24	32	20	31	17
Total	90	91	51	64	44	69	156	187	130	122	149	74

Figure 8 - Class 9's and 10's by Direction  
vs Gross Vehicle Weight

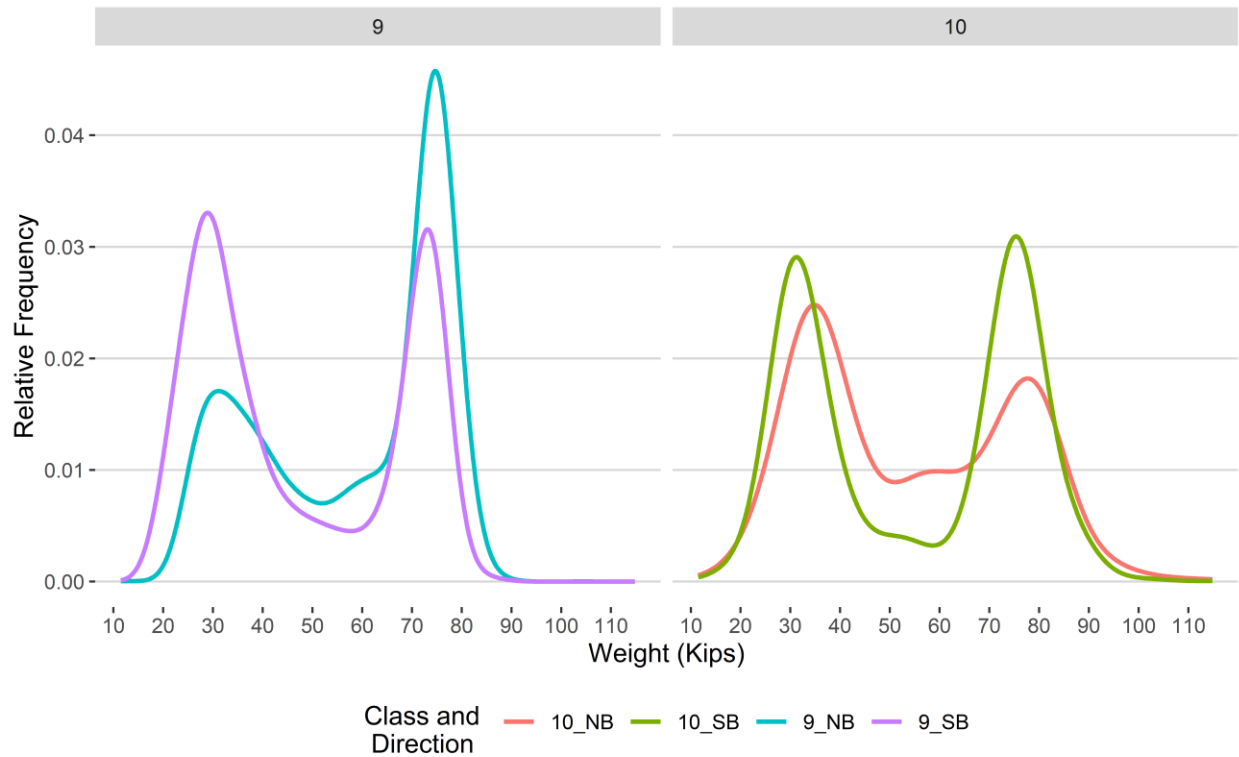


Figure 9 - Freight Percentage  
by Direction and Class

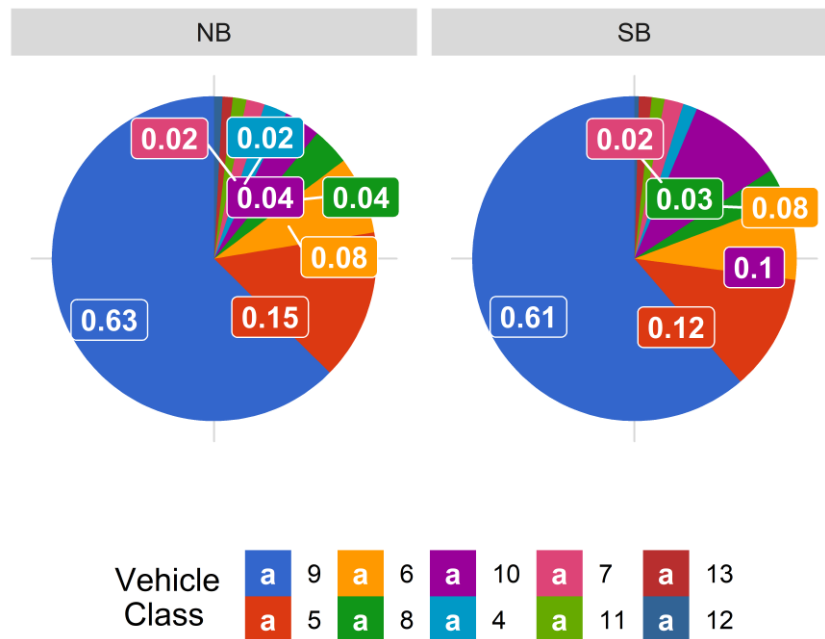


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

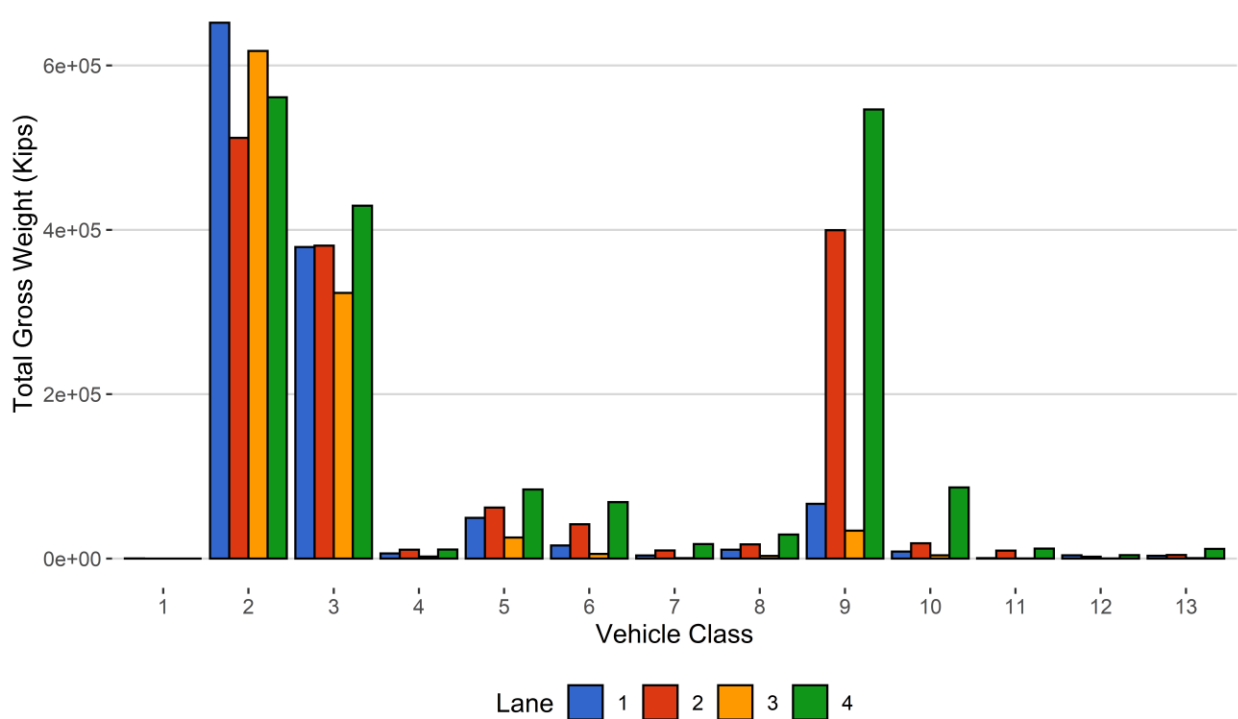


Figure 11 - Total Gross Vehicle Weight t

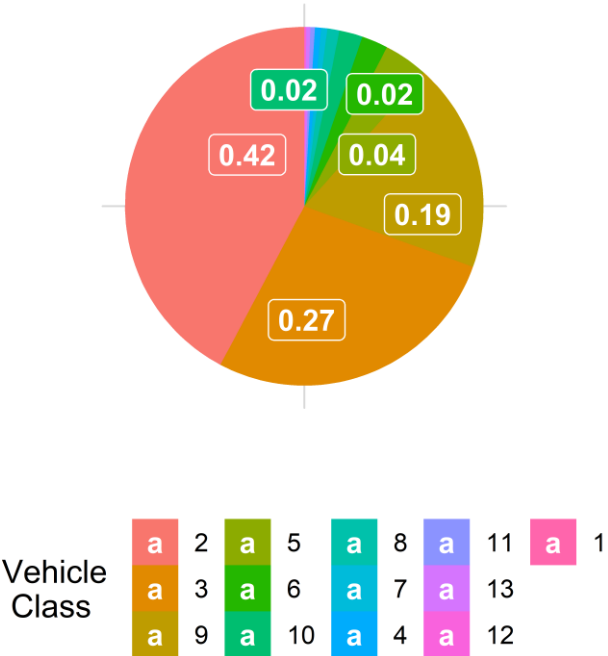


Figure 12 - Total ESALs by Class and Lane

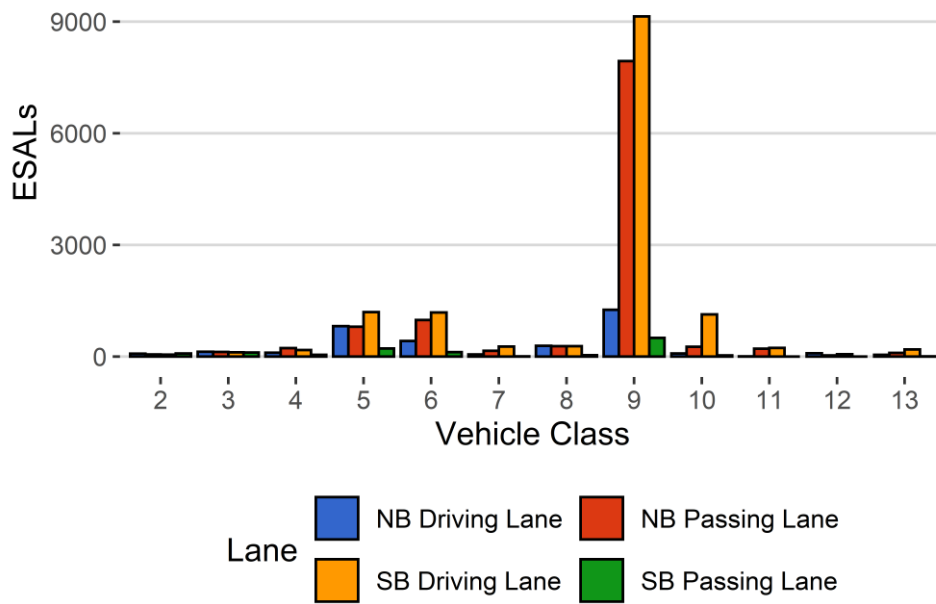
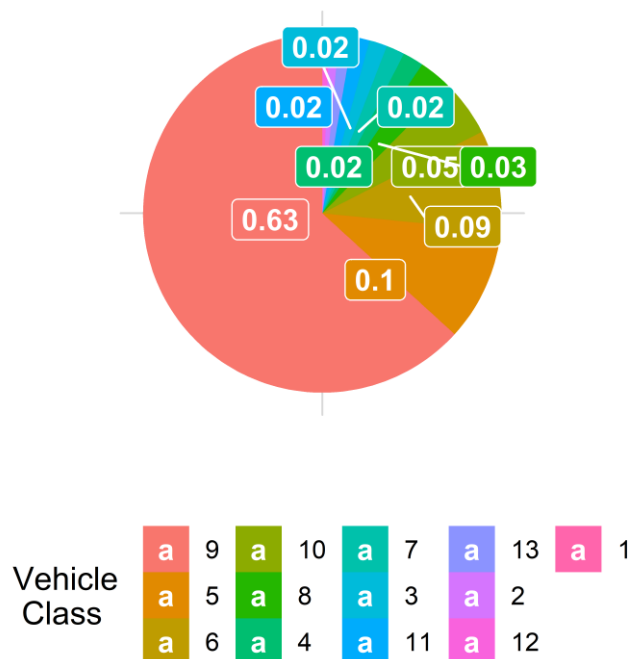


Figure 13 - ESALs by Class



**Table 1 Class 9 Front Axle Weight by Lane**

<i>Month</i>	<i>Lane 1 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 2 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 3 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 4 (kips)</i>	<i>Front Axle +/- 9%</i>
September 2015	11.60	0.00	10.96	0.00	11.15	0.00	11.07	0.00
October 2015	11.52	-0.73	10.72	-2.21	10.95	-1.77	10.76	-2.75
November 2015	11.33	-2.37	10.59	-3.34	10.95	-1.80	10.67	-3.59
February 2016	11.08	-4.53	10.14	-7.45	10.57	-5.14	10.35	-6.53
March 2016	11.12	-4.15	10.05	-8.26	10.66	-4.38	10.31	-6.87
April 2016	11.09	-4.37	10.11	-7.69	10.64	-4.54	10.46	-5.47
May 2016	11.22	-3.29	10.36	-5.42	10.90	-2.22	10.75	-2.92
June 2016	11.07	-4.60	10.59	-3.35	11.08	-0.55	10.89	-1.57
July 2016	11.12	-4.18	10.75	-1.90	11.27	1.09	11.10	0.29
January 2017	12.39	6.82	12.00	9.49	11.54	3.55	10.63	-3.94
February 2017	11.58	-0.18	11.71	6.87	11.07	-0.69	10.45	-5.60
March 2017	11.67	0.55	12.00	9.47	11.10	-0.44	10.50	-5.09
April 2017	11.82	1.87	12.08	10.24	11.18	0.30	10.52	-4.93
May 2017	11.94	2.90	12.35	12.67	11.14	-0.06	10.57	-4.48
June 2017	12.22	5.31	12.51	14.18	11.09	-0.52	10.59	-4.31
July 2017	12.23	5.44	12.54	14.40	11.23	0.76	10.64	-3.83
August 2017	12.25	5.62	12.58	14.79	11.11	-0.35	10.69	-3.38
September 2017	12.29	5.98	12.70	15.87	11.20	0.48	10.66	-3.65
October 2017	12.00	3.44	11.43	4.35	11.35	1.81	10.72	-3.17
November 2017	12.10	4.31	11.48	4.78	11.37	2.02	10.77	-2.69
December 2017	12.12	4.48	11.23	2.48	11.38	2.11	10.82	-2.25
January 2018	11.93	2.86	11.01	0.47	11.30	1.35	10.63	-4.00
February 2018	11.92	2.76	10.85	-1.03	11.33	1.62	10.43	-5.73
March 2018	11.95	3.01	11.06	0.97	11.24	0.83	10.38	-6.19
April 2018	11.59	-0.09	10.81	-1.36	10.89	-2.27	10.06	-9.08
May 2018	11.52	-0.67	10.58	-3.47	10.92	-2.03	10.09	-8.80

June 2018	11.60	-0.01	10.69	-2.44	10.91	-2.08	10.16	-8.24
July 2018	11.82	1.89	10.77	-1.75	11.13	-0.10	10.21	-7.79
August 2018	11.78	1.50	10.78	-1.59	11.08	-0.56	10.21	-7.77
September 2018	11.73	1.11	10.85	-1.00	11.05	-0.87	10.24	-7.52
October 2018	11.57	-0.30	10.82	-1.25	11.12	-0.23	10.20	-7.80
November 2018	11.43	-1.44	10.84	-1.11	11.13	-0.15	10.19	-7.89
December 2018	11.46	-1.22	10.62	-3.10	11.08	-0.57	10.18	-7.99
January 2019	11.52	-0.70	10.69	-2.42	11.14	-0.09	10.15	-8.31
February 2019	11.38	-1.88	10.58	-3.48	11.11	-0.30	10.01	-9.58
March 2019	11.46	-1.25	10.41	-5.01	11.05	-0.88	9.99	-9.72
April 2019	11.41	-1.65	10.22	-6.68	11.02	-1.17	9.92	-10.36
May 2019	11.46	-1.21	10.41	-4.96	11.02	-1.16	9.90	-10.59
June 2019	11.62	0.21	10.48	-4.40	11.08	-0.63	9.93	-10.30
July 2019	11.79	1.66	10.59	-3.34	11.21	0.60	10.08	-8.96
August 2019	11.90	2.61	10.71	-2.29	11.18	0.26	10.06	-9.07
September 2019	11.73	1.08	10.73	-2.10	11.24	0.80	10.08	-8.93
October 2019	11.67	0.57	10.86	-0.87	11.34	1.73	10.07	-9.02
November 2019	11.61	0.04	11.04	0.74	11.30	1.38	10.08	-8.94

**Table 2 Vehicle Classification Data**

<i>Vehicle Class</i>	<i>Monthly Average Daily Volume</i>	<i>Monthly Total Volume</i>	<i>Monthly Total Volume Percentage</i>	<i>Monthly Total Overweight Vehicles</i>	<i>Monthly Total Overweight Percentage</i>
1	0	9	0	0	0
2	20167	605024	65.9	0	0
3	8804	264123	28.8	0	0
4	33	991	0.1	24	0.9
5	558	16735	1.8	335	12
6	144	4316	0.5	385	13.8
7	19	570	0.1	82	2.9
8	67	1998	0.2	82	2.9
9	696	20880	2.3	1516	54.4
10	74	2225	0.2	232	8.3
11	14	420	0	11	0.4
12	6	170	0	27	1
13	8	253	0	94	3.4
<b>TOTAL</b>	<b>30590</b>	<b>917714</b>	<b>100</b>	<b>2788</b>	<b>100</b>

**Table 3 Top 10 Gross Vehicle Weight, Class 9 and 10**

<i>Date</i>	<i>Day of Week</i>	<i>Time</i>	<i>Vehicle Class</i>	<i>Direction</i>	<i>Lane</i>	<i>GVW (lbs)</i>
2019-11-21	Thursday	14:52:38	10	NB	2	142.61
2019-11-21	Thursday	12:16:31	10	NB	2	136.82
2019-11-21	Thursday	11:02:04	10	NB	2	125.05
2019-11-21	Thursday	15:07:18	10	NB	2	124.71
2019-11-12	Tuesday	12:24:27	10	NB	2	114.83
2019-11-14	Thursday	15:40:20	10	SB	4	114.71
2019-11-21	Thursday	15:24:03	10	NB	2	108.99
2019-11-09	Saturday	13:49:00	10	NB	2	106.87
2019-11-14	Thursday	09:05:51	9	NB	2	104.43
2019-11-05	Tuesday	16:04:26	10	SB	4	103.38

**Table 4 Freight Summary**

<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	NB	15	516	64	12.4	16233	833	4726
5	NB	8	7844	832	10.6	105389	6067	24646
6	NB	19	1698	246	14.5	53069	4302	12741
7	NB	11.5	243	0	0	13673	0	5439
8	NB	31	806	336	41.7	20132	7695	2781
9	NB	33	7932	1198	15.1	431913	34204	104845
10	NB	33.5	498	88	17.7	24424	2545	5345
11	NB	36.5	175	4	2.3	9985	130	1872
12	NB	36.5	96	3	3.1	6079	55	1342
13	NB	31.5	92	0	0	7601	0	2351
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>19900</b>	<b>2771</b>	<b>****</b>	<b>688498</b>	<b>****</b>	<b>166089</b>
<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	SB	15	439	82	18.7	12365	1038	3505
5	SB	8	8283	1577	19	98651	10884	22501
6	SB	19	2461	456	18.5	66880	7249	14393
7	SB	11.5	306	0	0	17920	0	7201
8	SB	31	1119	704	62.9	15439	16826	1287
9	SB	33	12190	4659	38.2	454359	125882	102918
10	SB	33.5	1646	530	32.2	74718	15667	18666
11	SB	36.5	230	25	10.9	11324	809	1921
12	SB	36.5	68	7	10.3	3884	204	829
13	SB	31.5	152	2	1.3	11989	56	3632
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>26894</b>	<b>8042</b>	<b>****</b>	<b>767528</b>	<b>****</b>	<b>176852</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>46794</b>	<b>10813</b>	<b>329</b>	<b>1456026</b>	<b>234442</b>	<b>342941</b>

**Table 5 Gross Vehicle Weight by Class and Lane**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	8	0	3	0	11	0
2	652036	511994	617638	561263	2342931	42.2
3	379051	380683	323295	429403	1512431	27.3
4	6239	10826	2450	10952	30468	0.5
5	49500	61955	25506	84029	220990	4
6	15782	41590	5531	68598	131500	2.4
7	3800	9873	443	17477	31594	0.6
8	10703	17124	3181	29085	60093	1.1
9	66520	399596	33802	546438	1046357	18.9
10	8459	18510	3954	86431	117353	2.1
11	440	9675	100	12033	22247	0.4
12	3885	2248	27	4060	10221	0.2
13	3263	4337	420	11625	19646	0.4
<b>TOTAL</b>	<b>1199687</b>	<b>1468411</b>	<b>1016350</b>	<b>1861393</b>	<b>5545841</b>	<b>100</b>
<b>GVW/LANE</b>	<b>21.63</b>	<b>26.48</b>	<b>18.33</b>	<b>33.56</b>	<b>100</b>	<b>0</b>

**Table 6 ESALs by Class and Lane and Flexible ESAL Factors**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.1
2	79	61	82	52	274	0.92	9e-04
3	129	127	109	116	482	1.62	0.0038
4	106	231	50	175	562	1.89	1.18
5	818	804	221	1197	3040	10.2	0.38
6	423	984	120	1184	2711	9.1	1.31
7	61	157	7	270	495	1.66	1.8
8	291	279	37	282	889	2.98	0.93
9	1260	7938	504	9139	18840	63.22	1.88
10	84	267	33	1132	1516	5.09	1.41
11	7	216	3	236	463	1.55	2.26
12	89	31	0	62	182	0.61	2.14
13	50	98	5	195	347	1.17	2.76
<b>TOTAL</b>	<b>3398</b>	<b>11191</b>	<b>1171</b>	<b>14042</b>	<b>29802</b>	<b>100</b>	<b>16</b>
<b>ESALS/LANE</b>	<b>11.4</b>	<b>37.6</b>	<b>3.9</b>	<b>47.1</b>	<b>100</b>	<b>-</b>	<b>-</b>

**Table 7 Site Summary: Volume and Vehicle Class**

<i>Month</i>	<i>Total Volume</i>	<i>Monthly ADT</i>	<i>Monthly HCAD T</i>	<i>Passenger Vehicles</i>	<i>Passenger Vehicles %</i>	<i>Heavy Commercial Vehicles</i>	<i>Heavy Commercial Vehicles %</i>	<i>Heavy Commercial Vehicles in Driving Lane %</i>	<i>Heavy Commercial Vehicles in Passing Lane %</i>
Dec 2018	930046	30002	1504	883414	95	46632.1	5	60.6	39.4
Jan 2019	881451	28434	1620	831226	94.3	50225.1	5.7	61.3	38.7
Feb 2019	786575	28092	1649	740410	94.1	46164.9	5.9	62.3	37.7
Mar 2019	958807	30929	1610	908902	94.8	49905.2	5.2	62.1	37.9
Apr 2019	962362	32079	1594	914550	95	47811.7	5	65	35
May 2019	1046270	33745	1867	988387	94.5	57883	5.5	59.9	40.1
Jun 2019	1065465	35516	1951	1006926	94.5	58538.7	5.5	62.4	37.6
Jul 2019	1170433	37756	2082	1105891	94.5	64541.8	5.5	59.2	40.8
Aug 2019	1132052	37639	2070	1067883	94.3	64169	5.7	63.3	36.7
Sep 2019	1047827	35284	1891	991094	94.6	56732.6	5.4	63.9	36.1
Oct 2019	1076632	34475	1975	1015421	94.3	61210.7	5.7	63	37
Nov 2019	917714	30891	1619	869157	94.7	48557.1	5.3	63.4	36.6
<b>TOTAL</b>	<b>11975634</b>	<b>-</b>	<b>-</b>	<b>11323261</b>	<b>-</b>	<b>652372</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>997970</b>	<b>32903</b>	<b>1786</b>	<b>943605</b>	<b>95</b>	<b>54364</b>	<b>5</b>	<b>62</b>	<b>38</b>

**###ESALs**

<i>Month</i>	<i>ESALS NB Passing Lane</i>	<i>ESALS NB Driving Lane</i>	<i>ESALS SB Driving Lane</i>	<i>ESALS SB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
Dec 2018	3150	10517	1329	12758	27753	57	43	2.4
Jan 2019	3323	12230	1296	15044	31893	58	42	2.1
Feb 2019	3621	10379	1146	13258	28405	59	41	1.6
Mar 2019	2986	10599	1079	13982	28646	59	41	1.7
Apr 2019	2688	7038	1141	14222	25089	67	33	0.5

May 2019	3613	11993	1449	14268	31323	57	43	1.2
Jun 2019	9436	21061	3719	28974	63190	61	39	1
Jul 2019	6609	11837	3842	15524	37811	59	41	2.7
Aug 2019	6353	14353	1557	16585	38848	59	41	2.4
Sep 2019	4324	21260	1441	15143	42167	46	54	0.6
Oct 2019	5137	15593	1960	16647	39337	55	45	2.2
Nov 2019	3593	18296	1176	14062	37126	48	52	0.8
<b>TOTAL</b>	<b>54831</b>	<b>165157</b>	<b>21135</b>	<b>190466</b>	<b>431588</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>4569</b>	<b>13763</b>	<b>1761</b>	<b>15872</b>	<b>35966</b>	<b>57</b>	<b>43</b>	<b>2</b>

### ###Gross Vehicle Weight

<i>Month</i>	<i>GVW NB Passing Lane</i>	<i>GVW NB Driving Lane</i>	<i>GVW SB Passing Lane</i>	<i>GVW SB Driving Lane</i>	<i>Total GVW Kips</i>
Dec 18	1149792	1476541	1030529	1815082	5471944
Jan 19	1125027	1469786	949823	1852076	5396712
Feb 19	1024314	1306617	842483	1640893	4814307
Mar 19	1213935	1489460	1027517	1902639	5633552
Apr 19	1195607	1332212	1026882	1915963	5470663
May 19	1318970	1723874	1131963	2073887	6248694
Jun 19	2796503	3349865	2422840	4302709	12871916
Jul 19	1609593	1811100	1549550	2183375	7153618
Aug 19	1561467	1851786	1248051	2369043	7030347
Sep 19	1391468	1611457	1164568	2124653	6292146
Oct 19	1461199	1738795	1250004	2206354	6656352
Nov 19	1206512	1472922	1016527	1862359	5558320
<b>TOTAL</b>	<b>17054385</b>	<b>20634414</b>	<b>14660737</b>	<b>26249034</b>	<b>78598570</b>
<b>AVERAGE</b>	<b>1421199</b>	<b>1719535</b>	<b>1221728</b>	<b>2187419</b>	<b>6549881</b>

### ###Overweight Vehicles

<i>Month</i>	<i>Total Number of Overweight Vehicles</i>	<i>Overweight / Total Volume</i>	<i>Overweight / Heavy Commercial Volume</i>	<i>Number Over 88,000 lbs</i>	<i>Number Over 98,000 lbs</i>
Dec 2018	2392	0.3	5.2	140	40
Jan 2019	2941	0.3	6	137	49
Feb 2019	2522	0.3	5.6	87	39
Mar 2019	1828	0.2	3.8	86	34
Apr 2019	1493	0.2	3.2	62	26
May 2019	2111	0.2	3.7	110	40
Jun 2019	5152	0.3	4.5	224	82
Jul 2019	3542	0.3	5.6	230	51
Aug 2019	3703	0.3	5.9	175	59

Sep 2019	3025	0.3	5.5	178	58
Oct 2019	3883	0.4	6.6	206	70
Nov 2019	2861	0.3	6.1	111	41
<b>TOTAL</b>	<b>35453</b>	<b>-</b>	<b>-</b>	<b>1746</b>	<b>589</b>
<b>AVERAGE</b>	<b>2954.4</b>	<b>0.3</b>	<b>5.1</b>	<b>145.5</b>	<b>49.1</b>

### ###Freight

<i>Month</i>	<i>NB Freight Tons</i>	<i>SB Freight Tons</i>	<i>Total Freight</i>	<i>NB Freight %</i>	<i>SB Freight %</i>
Dec 2018	158161	156474	314635	50.3	49.7
Jan 2019	175183	176870	352053	49.8	50.2
Feb 2019	156505	160401	316907	49.4	50.6
Mar 2019	162605	173632	336237	48.4	51.6
Apr 2019	117790	188701	306491	38.4	61.6
May 2019	187128	197189	384317	48.7	51.3
Jun 2019	353894	404240	758134	46.7	53.3
Jul 2019	206750	232123	438873	47.1	52.9
Aug 2019	221471	222957	444428	49.8	50.2
Sep 2019	176422	203961	380383	46.4	53.6
Oct 2019	210483	230292	440775	47.8	52.2
Nov 2019	166089	176852	342941	48.4	51.6
<b>TOTAL</b>	<b>2292481</b>	<b>2523693</b>	<b>4816175</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>191040.1</b>	<b>210307.8</b>	<b>401347.9</b>	<b>47.6</b>	<b>52.4</b>